WatchGuard®
SOHO User Guide

SOHO and SOHO|tc 2.3

WatchGuard®

TECHNOLOGIES, INC.

Registration and identification information

Please use this area to enter your SOHO information.

SOHO Serial Number:	
LiveSecurity User ID:	
Password:	

The SOHO serial number is located on the bottom of the SOHO. You create a LiveSecurity user ID and password when you register your WatchGuard SOHO or SOHO|tc. To register, after you install your SOHO, open your browser to 192.168.111.1/login.htm and click **Click here to register your SOHO**.

Please keep this information in a secure place.

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DocVer: B-2.3-User-2

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Welcome

Congratulations on purchasing the ideal solution for providing secure access to the Internet – the WatchGuard SOHO or WatchGuard SOHO|tc. Your new security device will give you peace of mind when connecting to the Internet using a high-speed cable or DSL modem, a leased line, or ISDN.

This User Guide applies to both the SOHO and SOHO|tc. The only difference between these two devices is the ability to create and use a Virtual Private Network (VPN). VPN can be added to the SOHO, while the SOHO|tc already has installed VPN capabilities.

In this guide, the name SOHO is used to refer to both the SOHO and SOHO|tc. The most current installation and user information is available on the Internet at:

http://bisd.watchguard.com/soho/install

Technical support is also available at:

(877) 232-3531	U.S.; End-user support
(206) 521-8375	U.S.; Authorized Reseller support
(360) 482-1083	International support

Redeeming SOHO upgrade certificates

Once you have purchased an upgrade certificate, go to the following Web site:

http://bisd.watchguard.com/soho/upgrade

On this Web page, enter the SOHO serial number, upgrade certificate serial number, and an upgrade key from the certificate. Click **Upgrade** and reboot your SOHO. You do not need to have registered the unit and created a login prior to redeeming the certificate.

Using this guide

This manual assumes that you are familiar with your computer's operating system. If you have questions about navigating in your computer's environment, please refer to your system user manual.

The following conventions are used throughout this guide.

Convention	Indication
Bold type	Denotes menu commands, dialog box options, Web page options, Web page names. For example: "On the System Information page, select Disabled."
CAUTION	Denotes a warning or precautionary information.
NOTE	Denotes important information, a helpful tip, or additional instructions.

Table of Contents

CHAPTER 1

Installation

Before you begin

Pre-installation checklist

Before installing your new WatchGuard SOHO please ensure that you have:

- A 10BaseT Ethernet I/O network card installed in your computer.
- A cable or DSL modem with a 10BaseT port.
- Two Ethernet network cables with RJ45 connectors. These must *not* be “crossover cables” (which are usually red or orange). One cable is furnished with your unit. A second cable may have been supplied with your modem. If not, you will need to purchase a second Ethernet, RJ45 cable. Make sure that both cables are long enough to comfortably connect the modem to the SOHO and the SOHO to the computer in your individual office environment.

- An operational Internet connection.
  Setup of your SOHO requires access to the Internet. If your connection does not work, please contact your Internet service provider (ISP). When your connection has been established, you may proceed with installation and setup.
- If you have either a cable or DSL modem, consult the manual that came with your service, or call the ISP to find out whether your particular modem supports DHCP or PPPoE. You will need this information later in the installation process.
- If you are using PPPoE to connect to your local Internet service provider, the WatchGuard SOHO must be running firmware version 2.0 or later.
- An installed Web browser – either Netscape Navigator 4.5 (or higher) or Internet Explorer 4.0 (or higher).
- SOHO serial number.

Performing manual installation

Before you begin the installation process, connect to the Internet. You need to determine your current TCP/IP settings and disable your HTTP proxy.

Determine your current TCP/IP settings

For your reference, record the your computer’s current TCP/IP settings in the chart provided at the end of this section. Different operating systems will supply different information. To locate your settings:

Microsoft Windows NT or 2000

1 Click **Start** ⇒**Programs** ⇒**Command Prompt.**

2 At the C:\ prompt, enter `ipconfig/all`. Press **Enter**.

3 Enter your current TCP/IP settings in the chart provided below.

4 Click **Cancel**.

Microsoft Windows 95 or 98 or ME

1 Click **Start** ⇒**Run.**

2 At the C:\ prompt, enter `winipcfg`. Click **OK**.

3 Select the "Etherenet Adapter."
Enter your current TCP/IP settings in the chart provided below.

4 Click **Cancel.**

Macintosh

1 Click **Apple menu** ⇒**Control Panels** ⇒**TCP/IP**.

2 Enter your current TCP/IP settings in the chart provided below.

3 Close the window.

Other operating systems (Unix, Linux)

1 Consult your operating system guide to locate the TCP/IP screen.

2 Enter settings in the chart provided below.

3 Exit the TCP/IP configuration screen**.**

TCP/IP Setting		Value
IP Address		. . .
Subnet Mask		. . .
Default Gateway		. . .
DHCP Enabled		Yes No
Primary WINS Server		. . .
Secondary WINS Server		. . .
DNS Server(s)	Primary	. . .
	Secondary	. . .

NOTE

If you are connecting more than one computer to the private network behind the SOHO, obtain the configuration TCP/IP information for each computer.

Disable your browser’s HTTP proxy

To configure a WatchGuard SOHO after it is installed, you must be able to access the special configuration pages that reside on the SOHO. If the HTTP proxy in your browser is enabled, you can not access these pages, and you can not complete the configuration process.

With the HTTP proxy enabled, the browser automatically points itself to Web pages located on the Internet, and you cannot direct the browser to Web pages located in other places. Disabling the HTTP will not prevent you from accessing your favorite Web sites, but it will allow you to access the special configuration pages that reside only on the SOHO.

To disable the HTTP proxy in three commonly used browsers, see the instructions below. If your browser is not listed, see your browser Help menus to learn how to disable the HTTP proxy.

Netscape 4.5 or 4.7

1 Open Netscape.

2 Click **Edit** ⇒**Preferences**.
The Preference dialog box appears.

3 Click the **+** before **Advanced** to expand the heading.

4 Click **Proxies**.

5 Select **Direct Connection to the Internet**.

6 Verify that the **Automatic Proxy Configuration** checkbox is enabled.

7 Click **OK** to save the settings.

Internet Explorer 4.0

1 Open Internet Explorer.

2 Click **View** ⇒**Internet Options**.

3 Select the **Connections** tab.

4 Disable the checkbox **Access the Internet using a proxy server**.

5 Enable the checkbox **Connect to the Internet using a local area network**.

6 Click **Configure** at the bottom on the **Internet Options** screen.

7 Record the URL box information here: ____________________

8 Click **OK** to save settings.

Internet Explorer 5.0

1 Open Internet Explorer.

2 Click **Tools** ⇒**Internet Options**.
The Internet Options screen displays.

3 Click the **Advanced** tab.

4 Scroll down the page to **HTTP 1.1 Settings**.

5 Clear all checkboxes.

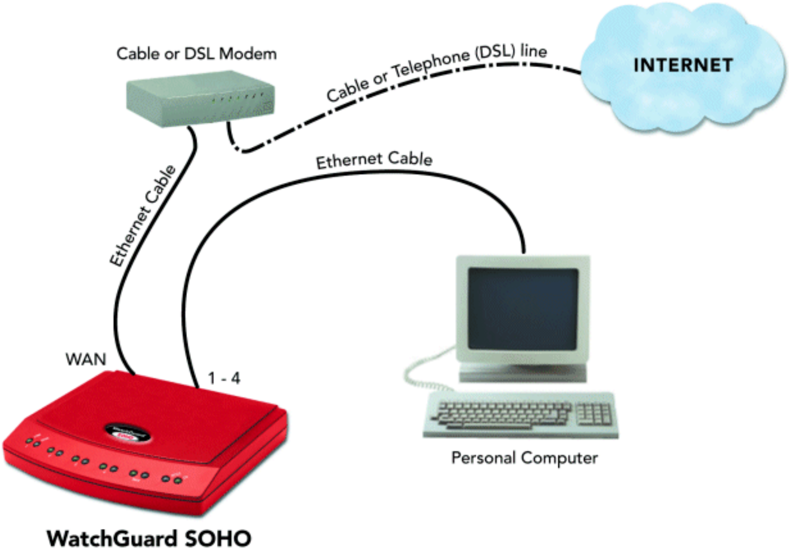
6 Click **OK** to save the settings.

Physically connecting your SOHO

Your WatchGuard SOHO can be used to protect a single computer or a multi-computer network. It can also function as a hub to connect a variety of other devices.

Cabling the SOHO for one to four devices

The SOHO has four local ports. Each can be used to connect a variety of devices. These may include computers, printers, scanners, or other network peripherals. Your SOHO may replace an existing hub if you have no more than four devices to connect.



1 Complete the “Pre-installation checklist” on page 1.

2 Turn off your computer.

3 Unplug the power from your cable or DSL modem.

4 Unplug the Ethernet cable that is connected from your cable or DSL modem to your computer. Connect it from your modem to the WAN port on the SOHO.

   This creates a connection between the SOHO and the modem.

5 Plug the Ethernet cable supplied with your SOHO into any one of the numbered (1-4) ports on the SOHO. Plug the other end into the Ethernet card installed in your computer.

   This creates a connection between your modem and computer, with the SOHO in between. If you have additional computers, use additional Ethernet cables to connect them to the other numbered ports on the SOHO.

6 Turn on the power to your cable or DSL modem. Wait until the lights stop flashing, indicating that the modem is ready.

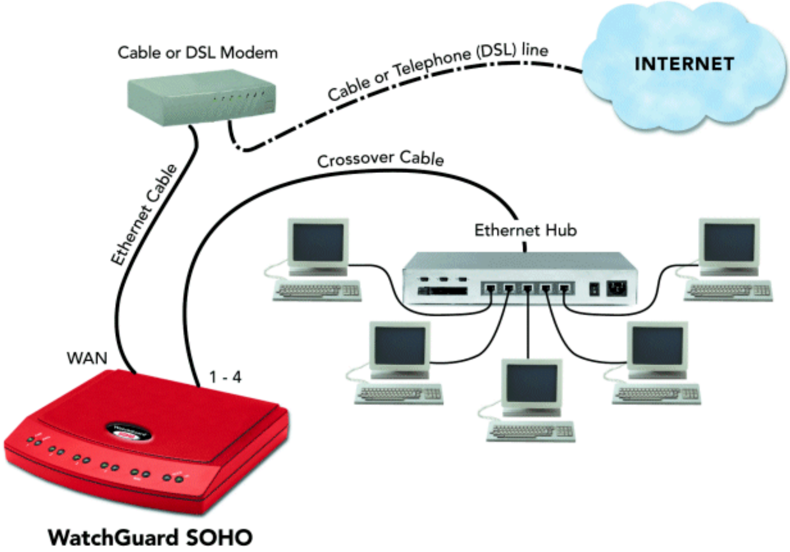
7 Attach the power cord to the SOHO and plug it into an outlet.

8 Restart your computer.

9 For information on the factory default configuration options, see “Default factory settings” on page 24. For specialized configurations, see “Configuring your public network” on page 12, as well as, “Configuring your private network” on page 20.

Cabling the SOHO for more than four computers

While there are only four, local ports (numbered 1-4) on the back of the SOHO, you can connect many more devices to your SOHO using network hubs.



The SOHO and SOHO|tc ship with a “10-seat” license. In other words, the SOHO allows up to ten computers on a network behind the SOHO to access the Internet. More than ten computers can exist on the network and communicate with each other, but only the first ten which attemtp to access the Internet will be allowed out. If you would like to upgrade your SOHO to a fifty-seat user license, please visit:

http://www.watchguard.com/sales/buyonline.asp.

1 Complete the “Pre-installation checklist” on page 1.

2 You will need these additional items:
   - One or more Ethernet hubs.
   - An Ethernet cable (with RJ-45 connectors) for each computer to connect the modem to the SOHO.
   - A crossover cable to connect each hub to the SOHO.

3 Turn off your computer and unplug the power from the cable or DSL modem.

4 Unplug the Ethernet cable that is connected from your cable or DSL modem to your computer, and instead connect it from your modem to the WAN port on the SOHO.
   This creates a connection between the SOHO and the modem.

5 Plug a crossover cable into any of the numbered (1-4) ports on the SOHO. Plug the other end into an Ethernet hub.
   You can use a straight cable but this would then need to be connected into the *uplink* port of the hub.

6 Using Ethernet cables, connect the hub output to the Ethernet card installed in each of your computers.
   If you have more computers to connect, connect another SOHO output to another Ethernet hub, and then connect additional Ethernet cables between the second Ethernet hub and the RJ-45 connections on the backs of those computers.

7 Turn on the power to your cable or DSL modem. Wait until the lights stop flashing, indicating that the modem is ready.

8 Attach the power cord to the SOHO and plug it into an outlet.

9 Restart your computer.

CHAPTER 2

Setting Up Your SOHO Network

How does a firewall work?

Fundamentally, a firewall is a way of differentiating between, as well as protecting, “us” from “them”. On the public side of your SOHO firewall is the entire Internet. The Internet has many resources that you want to be able to reach, such as the Web, e-mail, and conferencing. It also presents dangers to the privacy and security of your computers. On the private side of your SOHO firewall are all the devices you want to protect from these dangers.

Using rules we will discuss in Chapter 3: “Configuring Services for a SOHO” on page 33, the WatchGuard SOHO evaluates all traffic between the public network (Internet) and the private network (your computers) and blocks any suspicious activity. In order for this to work as described, you must first configure both the public and private network to work together and to talk to one another as well as the rest of the world.

NOTE

The configuration instructions in this chapter assume that you are using Windows 95/98/ME. If this is not the case, see your operating system help or user guide to locate the equivalent options and commands.

Configuring your public network

When you configure the public network, you establish how the SOHO communicates with your Internet service provider (ISP). This configuration is very much dependent on how your ISP distributes network addresses – using DHCP or PPPoE.

Network addressing

Each networked computer in the entire world must have an IP address to identify itself to other computers. The most common method to distribute IP addresses is to use Dynamic Host Configuration Protocol (DHCP). When you connect your computer to the network, a DHCP server at your ISP automatically assigns it a network IP address. This eliminates the ISP from having to manually assign and manage IP addresses.

IP address assignments can be either dynamic or static. With dynamic, your ISP assigns your computer a new address every time you connect. When you power down, you release the address, and it is reassigned. An IP address that is static, on the other hand, belongs to your computer at all times whether or not you are currently using it. No other computer anywhere on the network shares the same address.

A third way of assigning addresses is called PPPoE (Point-to-Point Protocol over Ethernet). PPPoE combines some of the advantages of Ethernet and PPP by simulating a standard Dial-Up connection. It is popular among many ISPs because it enables them to use existing Dial-Up infrastructure such as billing, authentication, and security for DSL and cable modems.

Determining whether your ISP uses dynamic or static addressing

Most ISPs support both dynamic and static addressing. To determine if your connection to the Internet is dynamic or static:

1 Click **Start** ⇒ **Settings** ⇒ **Control Panel**.

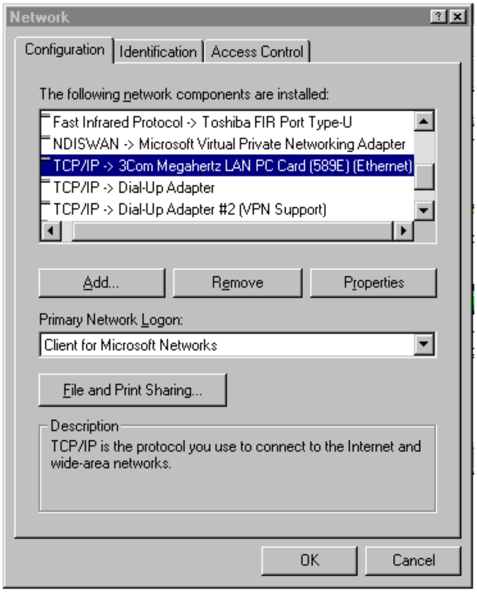
The Control Panel window appears.

2 Double-click the **Network** icon.

The Network dialog box appears.

3 Double-click the **TCP/IP** network component which is bound to your Ethernet card. Look for **(Ethernet)** in parentheses.

Reminder: The wording may differ slightly depending on the operating system and it's unique settings. A similar option, however, is found on all platforms.



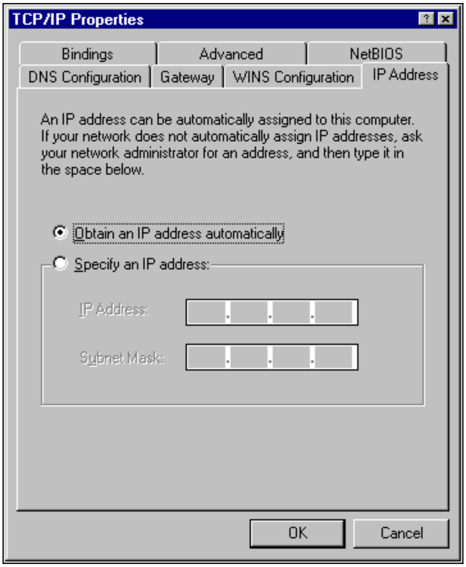
The following network components are installed:

Fast Infrared Protocol -> Toshiba FIR Port Type-U
NDISWAN -> Microsoft Virtual Private Networking Adapter
TCP/IP -> 3Com Megahertz LAN PC Card (589E) (Ethernet)
TCP/IP -> Dial-Up Adapter
TCP/IP -> Dial-Up Adapter #2 (VPN Support)

Primary Network Logon: Client for Microsoft Networks

Description
TCP/IP is the protocol you use to connect to the Internet and wide-area networks.

4 If “Obtain an IP Address Automatically” is selected, your computer is configured for dynamic DHCP. If “Obtain an IP Address Automatically” is not checked, your computer is configured for static addressing. The actual wording on the menu may differ depending on your operating system, but all platforms differentiate somehow between dynamic and static addressing.



An IP address can be automatically assigned to this computer. If your network does not automatically assign IP addresses, ask your network administrator for an address, and then type it in the space below.

● Obtain an IP address automatically

○ Specify an IP address:

IP Address: . . .

Subnet Mask: . . .

Configuring the SOHO public network for dynamic addressing

Out of the box, the SOHO is configured to obtain its public address information automatically, using dynamic DHCP. So if your ISP assigns you an address automatically (or dynamically), the SOHO itself will obtain all the addressing information it needs when it powers on and attempts to connect to the Internet. No further configuration of the SOHO is required. To complete the SOHO Public Network configuration, see “Release and renew the IP configuration” on page 19.

Configuring the SOHO public network for static addressing

If you are assigned a static address, then you must transfer the permanent address assignment from your computer to the SOHO itself. Instead of communicating directly to your computer, the ISP will now communicate first through the SOHO. To do this you must both modify the static settings on your personal computer as well as enter the information into the SOHO Configuration pages.

NOTE

The SOHO supports a mini, onboard Web server which provides a Web interface for configuring the unit. Therefore, the SOHO configuration pages are reached via your Web browser. Simply point your Web browser to the internal, Private IP address of the SOHO to reach these Web pages.

On your computer:

1 Click **Start ⇒ Settings ⇒ Control Panel**.
The Control Panel window appears.

2 Double-click the **Network** icon.
The Network dialog box appears.

3 Double-click the **TCP/IP** network component which is bound to your Ethernet card. Look for **(Ethernet)** in parentheses.
The Properties window appears with the addressing information already filled in.

4 Select the **Obtain an IP address automatically** option. Click **OK**.
Reminder: The wording may differ slightly depending on the operating system. A similar option, however, is found on all platforms.

5 If prompted with “Do you want to enable DHCP?” click **Yes**.

6 Save the changes.

7 On most platforms, click **OK** until the Control Panel window closes.

8 Shut down and reboot the computer.

On the SOHO:

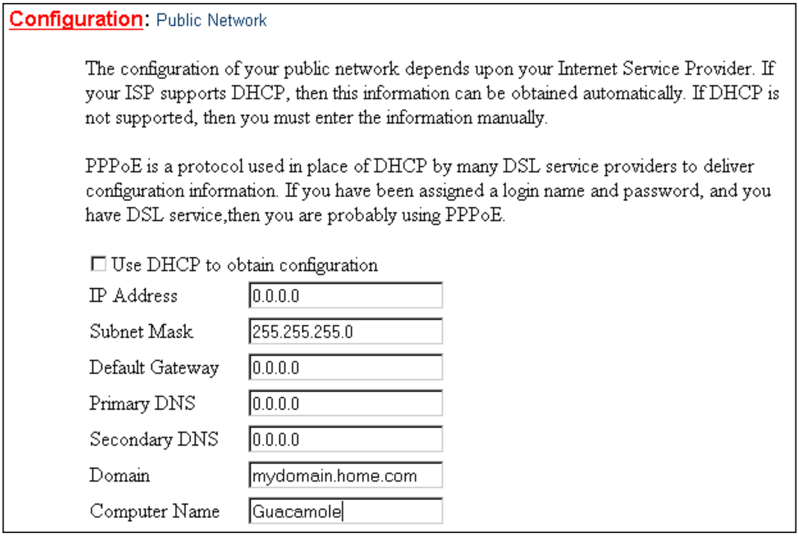
1 Open your Web browser. Click **Stop**.

At this point, the Internet connection is not fully configured, and the computer cannot load your home page from the Internet. However, the computer can access special configuration Web pages installed on the SOHO itself.

2 Using your Web browser, go to http://192.168.111.1.

If this does not work, see "Troubleshooting installation and network configuration" on page 25.

3 Click **Public Network**.



Configuration: Public Network

The configuration of your public network depends upon your Internet Service Provider. If your ISP supports DHCP, then this information can be obtained automatically. If DHCP is not supported, then you must enter the information manually.

PPPoE is a protocol used in place of DHCP by many DSL service providers to deliver configuration information. If you have been assigned a login name and password, and you have DSL service,then you are probably using PPPoE.

□ Use DHCP to obtain configuration

IP Address	0.0.0.0
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Primary DNS	0.0.0.0
Secondary DNS	0.0.0.0
Domain	mydomain.home.com
Computer Name	Guacamole

4 Disable the checkbox labelled **Use DHCP to Obtain Configuration**.

5 Enter the TCP/IP settings you copied from the computer when you started the install process.

6 Click **Submit**.

To complete SOHO Public Network configuration, see “Release and renew the IP configuration” on page 19.

Configuring SOHO public network for PPPoE

While less common, PPPoE is another method for an ISP to assign addresses. Check the information and manuals sent to you by your ISP to see if they use PPPoE. If you cannot find this information, contact your ISP and ask. You will need your PPPoE login name and password.

NOTE

The option to use PPPoE with the WatchGuard SOHO is available with firmware version 2.0 or later.

To configure the SOHO for PPPoE:

1 Open your Web browser and click **Stop**.

At this point, the Internet connection is not fully configured, and the computer cannot load your home page from the Internet. However, the computer can access special configuration Web pages installed on the SOHO itself.

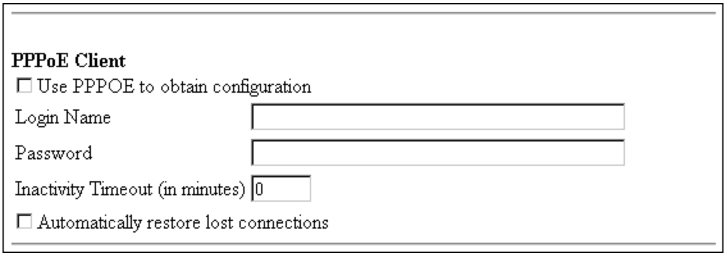
2 Using your Web browser, go to http://192.168.111.1.

If this does not work, see “Troubleshooting installation and network configuration” on page 25.

3 Click **Public Network**.

The Public Network page appears.

4 Scroll down to **PPPoE Client**.



PPPoE Client

☐ Use PPPOE to obtain configuration

Login Name

Password

Inactivity Timeout (in minutes) 0

☐ Automatically restore lost connections

5 Enable the checkbox labelled **Use PPPoE to obtain configuration**.

6 Enter the PPPoE **login name** supplied by your ISP.

7 Enter the PPPoE **password** supplied by your ISP

8 Enter the **Inactivity Timeout** period in minutes.

9 Click **Automatically restore lost connections.**

This enables a constant flow of "heartbeat' traffic between the SOHO and the PPPoE server. In the event of routine packet loss, this option allows the SOHO to maintain it's PPPoE connection. The SOHO may reboot to recover the PPPoE connection if the heartbeat fails. This provides for a more consistent Internet connection but will be seen as continuous traffic by the ISP and regulated as such.

10 Click **Submit**.

The configuration change is saved to the SOHO.

To complete SOHO Public Network configuration, see "Release and renew the IP configuration" on page 19.

Release and renew the IP configuration

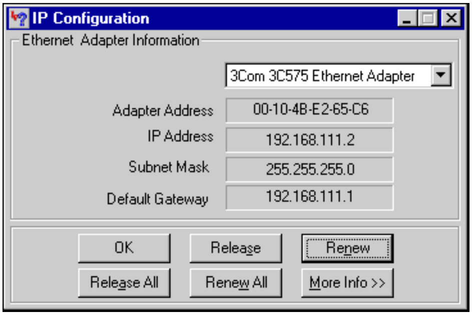
Regardless of what type of addressing your computer used originally, it will now obtain all of its information from the SOHO itself, using DHCP. To enable your computer to talk to the SOHO you must force it to release and renew all its IP configuration information. From your computer:

1 Click **Start** ⇒ **Programs** ⇒ **Command Prompt**.

2 At the C:\ prompt, enter `winipcfg`. Press **Enter**.
The IP Configuration dialog box appears.

3 Verify that the information is displayed for "Ethernet Adapter," not for "PPP Adapter," which would apply for a dial-up telephone modem.

4 Click the **Release** button. Then click the **Renew** button.
Your IP Configuration should look similar to the screenshot below. The values in the IP Configuration dialog box were obtained from the SOHO itself. The IP Address, Subnet Mask and Default Gateway entries must be completed and have the values displayed for address sharing to work as in the figure below. If you obtain different results, see "Troubleshooting installation and network configuration" on page 25.


IP Configuration

Ethernet Adapter Information

3Com 3C575 Ethernet Adapter

Adapter Address: 00-10-4B-E2-65-C6
IP Address: 192.168.111.2
Subnet Mask: 255.255.255.0
Default Gateway: 192.168.111.1

Configuring your private network

Out of the box, the SOHO automatically uses DHCP to assign addresses to any computer on your private network. In other words, every time you connect a computer to the SOHO, either directly or through a hub, it automatically attempts to obtain its addresses from the SOHO itself.

NOTE

To disable the SOHO DHCP server and assign addresses statically on your private network, open the SOHO Configuration menu, click Private Network, and disable the checkbox labelled Enable DHCP Server. This is not recommended for most SOHO users.

Configure additional computers to the private network

Up to four computers can be plugged directly into the four numbered ports (1-4) of the SOHO. A larger number of computers can be networked together by using one or more readily available 10BaseT Ethernet hubs with RJ-45 connectors. The SOHO system will coexist with other communications over the same local area network, and you can mix computers with different operating systems. If you wish to add one or more computers to your private network:

1 Ensure that any additional computer has an Ethernet card installed. Shut the computer down, connect it to the network the same way you did in “Cabling the SOHO for more than four computers” on page 8. Restart the computer.

2 Set the computer to obtain its address dynamically.
See “Determining whether your ISP uses dynamic or static addressing” on page 13..

3 Turn off and restart the computer.

4 Release and renew the IP configuration.
See “Release and renew the IP configuration” on page 19.. The computer will then obtain its TCP/IP settings dynamically from the SOHO unit.

Changing the SOHO system name and password

Passwords are a barrier between your computer and anyone trying to break in. They are the first line of defense in computer security. They are, unfortunately, the most frequently overlooked of all security measures. The SOHO system name and password are designed to protect the SOHO configuration from being altered by someone on your private network. In other words, when you have configured a SOHO system name and password, no one in your office or home will be able to change (deliberately or accidentally) your firewall settings without the system name and password.

CAUTION

Take steps to ensure that you do not lose your system name and password. Once you have enabled password protection, there is no other means of accessing your SOHO settings. Should you forget your name and/or password, the only means of resetting requires reverting your SOHO to its factory settings;, please see "How do I reset the SOHO to factory defaults?" on page 30, you will then need to reconfigure your SOHO.

You should change your password at least once a month to be secure. A password should be a combination of letters, numbers, and symbols that do not spell out common words. It should contain at least one special character, number, and a mixture of upper and lower case letters. To change the SOHO system password:

1 Using your Web browser, go to http://192.168.111.1.

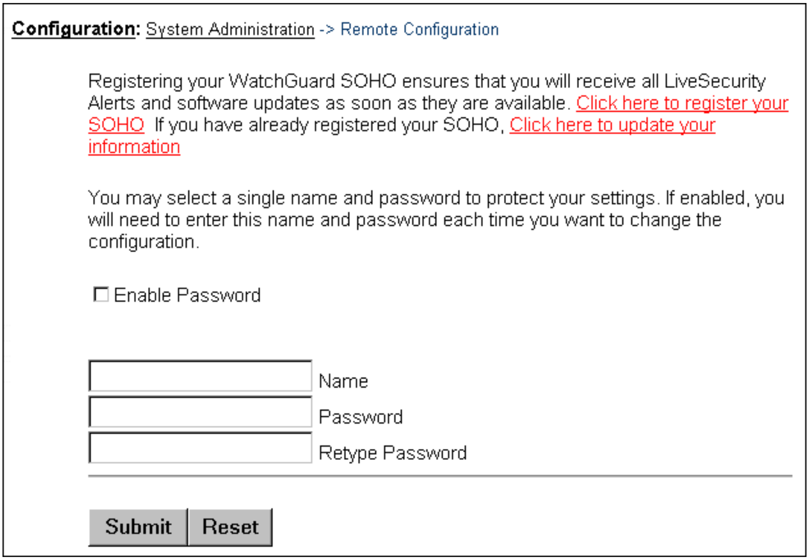
If this does not work, see "Troubleshooting installation and network configuration" on page 25.

2 Select **System Administration**.

The System Administration page appears.

3 Select **System Password**.

The System Password page appears.



Configuration: System Administration -> Remote Configuration

Registering your WatchGuard SOHO ensures that you will receive all LiveSecurity Alerts and software updates as soon as they are available. Click here to register your SOHO If you have already registered your SOHO, Click here to update your information

You may select a single name and password to protect your settings. If enabled, you will need to enter this name and password each time you want to change the configuration.

☐ Enable Password

▭	Name
▭	Password
▭	Retype Password

4 Check the **Enable Password** checkbox.

5 Enter the system user name in the **Name** field.

6 Enter the system password in the **Password** field.

7 Enter the system password again in the **Retype Password** field.

8 Click **Submit**.
The configuration change is saved to the SOHO and a password confirmation page appears. Click Configuration Home Page to return to the main menu.

Default factory settings

Your SOHO has the following default network and configuration settings:

Public Network

- Public network settings use DHCP

NOTE

DHCP must be enabled for you to be able to access the SOHO device when it boots up.

Private Network

- Private network IP address: 192.168.111.1.
- All computers on the private network automatically receive their addresses using dynamic DHCP.
- Ten seat license – Ten computers have access to the Internet through the SOHO. Remember, while only four devices connect directly to the LAN ports (numbered 1-4), one or more of these devices can be a hub or router. Please see, “Cabling the SOHO for more than four computers” on page 8

Virtual Private Networking

- IPSec VPN is not installed.

The SOHO|tc comes with the VPN Feature Key, however you must first enable the VPN Feature Key in order to configure virtual private networking. The SOHO does not come with the VPN Feature Key; it can be purchased separately.

Services

- All incoming services are blocked.
- All outgoing services are allowed.
- WebBlocker is not installed.
- No DMZ pass-through address entered.

System Administration

- No system name or password – the onboard configuration pages are available to all on the private network.
- No remote logging is configured.
- Remote configuration is disabled.

Troubleshooting installation and network configuration

The following information is offered to help overcome any minor difficulties that might occur when installing and setting up your SOHO.

GENERAL

What do the ON and MODE lights signify on the SOHO?

When the ON light is illuminated, the SOHO has power. When the MODE light is illuminated, the SOHO is operational.

How do I register my SOHO?

Registering your WatchGuard SOHO ensures that you receive all LiveSecurity alerts and software updates as soon as they are available. The first year of service is free with purchase of the SOHO. To register your SOHO:

1 Using your Web browser, go to http://192.168.111.1.

2 Click **System Administration** and then click **System Password**.

3 Click **Click here to register your SOHO**.

4 Enter your information and then click **Save Profile**.

CONFIGURATION

Where are the SOHO settings stored?

The configuration parameters for the SOHO are stored in a file named wg.cfg in the SOHO.

How do I change to a DHCP private IP address?

1 Make sure your computer is set up to use DHCP dynamic addressing (refer to page 10 of the SOHO User Guide).

2 Using your Web browser, go to http://192.168.111.1.

3 Click **Private Network**.

4 Enable the checkbox labeled **Enable DHCP Server** and then click **Submit**.

5 Click **Reboot** and wait for the SOHO to finish rebooting. The MODE and ON light flash at different times during boot, which takes about a minute.

How do I change to a static private IP address?

Before you can use a static IP address, you must have a base Private IP address and subnet mask.

The following IP address ranges and subnet masks are set aside for private networks in compliance with RFC 1918. Replace the X in the network IP address with a number between 1 and 254. The subnet addresses do not need to be changed.

Network IP range	Subnet mask
10.x.x.x	255.0.0.0
172.16.x.x	255.240.0.0
192.168.x.x	255.255.0.0

To change to a static private IP address:

1 Using your Web browser, go to http://192.168.111.1.

2 Click **Private Network**, and disable the checkbox labeled **Enable DHCP Server**.

3 Enter the information in the appropriate fields. Click **Submit**.

4 Click **Reboot** and wait for the SOHO to finish rebooting. The MODE light on the front of the SOHO will turn off, then back on.

How do I allow any incoming service?

With the SOHO, you can allow any incoming service but doing this opens your network to the public.

CAUTION

This is a major security risk. For instructions on how to allow any incoming services, refer to “Adding the Any service” on page 38

How do I allow incoming IP protocols?

You will need the IP address of the computer that will be receiving the incoming data and the IP protocol number that corresponds to the specific incoming IP protocol. To allow an incoming IP protocol:

1 Using your Web browser, go to http://192.168.111.1.

2 Click **Services** and then click **Allowed Incoming Services**.

3 Click **Add a Service** and then click **Add Other Service**.

4 In the protocol field, enter the protocol to allow.

5 Enter the IP address of the computer to receive incoming data for that protocol. Click **Submit**.

How do I set up and disable Web blocking?

1 Using your Web browser, go to http://192.168.111.1.

2 Click **Services** and then click **Web Blocking**.

3 Enable the checkbox labeled **Enable Web Blocking**. Enter a password, time limit per session for your password, and enable the checkbox next to the type of sites you want blocked.

To disable Web blocking, disable the checkbox labeled **Enable Web Blocking.**

How do I allow incoming services such as UDP, POP3, Telnet, and Web?

1 Using your Web browser, go to http://192.168.111.1.

2 Click **Services** and then click **Allowed Incoming Services**.

3 Click **Add a Service** and then click the service you want to add. For UDP, you will need to select **UDP** on the **Forward** drop list and enter the range of port numbers in the port fields. For all other services, enter the IP address of the computer that needs the incoming service.

4 Click **Submit**.

VPN MANAGEMENT

Before setting up a VPN, you must have the following:

- Two properly configured and working SOHOs or one SOHO and one Firebox with the latest version of firmware. Each SOHO must have the VPN feature key enabled.
- The static public IP address, the network address, and the subnet masks of both SOHOs. (The base private IP address of each SOHO must be static and unique.)
- The DNS and WINS server IP address, if used.
- The shared key (passphrase) for the tunnel.
- The same encryption method on each end of the tunnel (DES or 3DES).
- The same authentication method on each end (MD-5 or SHA-1).

How do I set up VPN between two SOHOs?

For detailed information on how to configure a VPN tunnel between two SOHO devices, download the SOHO to SOHO IPSec VPN Tunnel configuration instructions:

1 Using your Web browser, go to:

http://www.watchguard.com/support

2 Click **Interoperability** on the left of the page.

3 Click **VPN Configuration**.

4 Click **Configuring a SOHO to SOHO IPSec VPN Tunnel**.

5 Download and follow the instructions to configure your VPN tunnel.

TECHNICAL

How do I reboot my SOHO?

1 Using your Web browser, go to http://192.168.111.1.

2 Click **System Information**.

3 Click **Features and Version Information**.

4 Click **Reboot** and wait for the SOHO to finish rebooting. The MODE light on the front of the SOHO will turn off, then back on.

You can also reboot by removing the power source for ten seconds, and then restoring power.

How do I set up my SOHO for remote configuration?

This requires the add-on product, WatchGuard VPN Manager software, which is purchased separately. To purchase VPN Manager, go to:

https://www.watchguard.com/products/vpnmanager.asp

For more information on how to remotely configure a SOHO, see the VPN Manager Guide.

How do I reset the SOHO to factory defaults?

To reset the SOHO to factory settings, disconnect the power, disconnect all cables, plug one end of an Ethernet cable into the WAN port and the other end into any LAN port, connect power, wait 90 seconds, and disconnect power. Your SOHO is now reset to factory defaults so connect cables in original configuration and power up again.

How does the seat limitation on the SOHO work?

The default user license on the SOHO is 10. The first 10 computers on the network behind the SOHO to attempt access are allowed through to the Internet. To clear this list of the first 10 computers you will need to reboot the SOHO.

How do I get to the SOHO Knowledge Base?

Using your Web browser, to http://www.watchguard.com/support. Log in using your WatchGuard User Name and Password created when you registered. Click **Technical Support** and then click **Knowledge Base**.

I set a password on my unit, but I forgot it. Can you help?

If you forgot your password, you must reset the SOHO to its factory default. See question above on How do I reset the SOHO to factory defaults.

How do I install a SOHO using a Macintosh?

The SOHO User Guide explains the installation steps for Macintosh users. Refer to page 2 of the SOHO User Guide.

How do I know whether the cables are connected correctly to my SOHO?

There are twelve Link lights on the front of the SOHO grouped in pairs. The Link lights labeled WAN tell you if your SOHO is connected to your modem. If these lights are not illuminated, the SOHO is not connected to your modem. Check to make sure that both sides of the cable are connected and that your Internet connection is not down. The Link lights numbered 1 through 4 are the LAN Link lights. They tell you if the SOHO is connected to a computer or hub through that LAN port. If the lights are not illuminated, the SOHO is not connected to the computer or hub. Check to make sure that both sides of the cable are connected and that the computer or hub has power.

I can connect to the configuration screen; why can’t I browse the Internet?

This means that the SOHO is on, but something may be wrong with the connection from the SOHO to the Internet. Your ISP may be temporarily down--call your ISP. Make sure the cable or DSL modem is connected correctly and has power.

How do I register for Live Security?

Using your Web browser, go to http://192.168.111.1, and click **Live Security**.

How can I see the MAC address of my SOHO?

Using your Web browser, go to http://192.168.111.1/sysstat.htm.

What is a SOHO feature key?

The feature key is an encrypted mask that tells the SOHO which features are enabled.

I can't get a certain SOHO feature to work with a DSL modem.

Some DSL routers implement NAT firewalls. Running NAT in front of the SOHO causes problems with WebBlocker and the performance of IPSec. When a SOHO is used in conjunction with a DSL router, the NAT feature of the DSL router should be set for bridge-only mode.

CHAPTER 3

Configuring Services for a SOHO

How does information travel on the internet?

Each packet of information transported over the Internet must be packaged in a special way to ensure that it is able to travel from one computer to the next. A system called Internet Protocol (IP) takes chunks of information and wraps them up with a header identifying both where the information is going and how it should be handled enroute.

IP addresses

An IP address defines the specific computer on the Internet that should send or receive a packet. Every computer on the Internet has a unique address, including your SOHO device. When defining a service behind your firewall, you need to include the private network address for the machine hosting the application.

On the Internet, IP addresses can be identified using either a string of numbers or the user-friendly domain name. Thus, the IP address of the WatchGuard site is 209.191.160.60 while the domain name is www.watchguard.com.

Protocol

A protocol defines how a packet is bundled up and packaged for shipment across a network. The most commonly used protocols are Transmission Control Protocol (TCP) and User Datagram Protocol (UDP). In addition, there are special protocols, such as IP, which are used less frequently.

Port number

The port number alerts the computers at both the sending and receiving end how to handle the packet.

Services

A service is the combination of protocol(s) and port numbers associated with a specific application or communication type. To facilitate configuration of your SOHO, WatchGuard lets you select pre-configured versions of several commonly used services.

WatchGuard SOHO services

The WatchGuard SOHO enables you to customize what is allowed both incoming and outgoing through your firewall. With this feature, you can narrowly define what kind of communication is permitted between computers on the Internet and computers on your private network.

To facilitate configuring your SOHO, WatchGuard identifies several commonly used services. A service is the combination of protocol(s) and port numbers associated with a specific application or communication type.

Allowing incoming services

By default, the security stance of the SOHO is to deny unsolicited incoming packets to computers on the private network protected by the SOHO firewall. You can, however, selectively open your network to certain types of Internet connectivity. For example, if you would like to set up a Web server behind the SOHO, you can add an incoming Web service.

It is important to remember that each service you add opens a small window into your private network and marginally reduces your security. This is the inherent trade-off between access and security.

Network address translation

All incoming connections through a SOHO automatically use a feature called dynamic network address translation (dynamic NAT). Without dynamic NAT, your internal, private addresses would not be passed along the Internet to their destination.

Furthermore, the SOHO protects your internal network by disguising private IP addresses. During an Internet connection, all traffic passed between computers includes their IP address information. However, due to the dynamic NAT feature, applications and servers on the Internet only see the public, external IP address of the SOHO itself and are never privy to the addresses in your private network address range when they exchange information with a computer behind your firewall.

Imagine that you install a computer behind the SOHO with the private IP address 192.168.111.12. If this address were broadcast to the Internet, hackers could easily direct an attack on the computer itself. Instead, the SOHO converts the address automatically to the public, external address of the SOHO. When a hacker tries to violate the computer, they are stopped cold at the SOHO, never learning the true address of the computer.

Adding a pre-configured incoming service

Each service is defined by a combination of Internet protocols and port numbers to uniquely identify the connection type to applications and servers on the Internet. To facilitate configuring services, the WatchGuard SOHO Configuration pages include several of the most common types:

- FTP (File Transfer Protocol)
- Web (HTTP)
- Telnet
- POP3 (incoming e-mail)
- SSH

1 Using your Web browser, go to http:// 192.168.111.1.

2 Select **Services**.
The Services menu appears.

3 Select **Allowed Incoming Services**.
The Incoming Services menu appears. In addition, a list of allowed incoming services is displayed beneath the menu identified by protocol, port number, and destination on the private network.

4 Click **Add a Service**.
The Add New Incoming Services menu appears.

5 Select a pre-configured service type such as FTP, Web, or Telnet.
A configuration page appears prompting for the location of the service on your private network.

6 Enter the private network IP address of the computer hosting the service.
For example, if your Web server resides behind the SOHO on the private network IP address 192.168.111.12, enter that address.

7 Click **Submit**.

The configuration change is saved to the SOHO and the Show Incoming Rules page appears. The incoming service rules are identified by protocol, port, and destination on the private network.

Creating a custom incoming service

In addition to the pre-configured services provided by the WatchGuard SOHO Configuration interface, you can also create a custom service for a server on your private network. The limitations on the types of services you can add are as follows:

- Must use network address translation
- Must be a packet-filtering service (you cannot create custom proxy services)

Adding an incoming TCP or UDP service

1 Using your Web browser, go to http://192.168.111.1.

2 Select **Services**.

The Services menu appears.

3 Click **Allowed Incoming Services**. Click **Add a Service**.

The Add New Incoming Services menu appears.

4 Click **Add Other TCP or UDP Service**.

The New Port Forward configuration page appears.

5 Use the drop list to select a protocol type: TCP or UDP.

6 Enter the port number range in the port to port fields.

If configuring for a single port, enter the same port number in both fields. To determine the port number, open your Web browser to http://help.livesecurity.com/lss/46/reference/ports4.htm.

7 Enter the private network IP address of the computer hosting the service.

8 Enter a name for the service.

9 Click **Submit**.

The configuration change is saved to the SOHO, and the Show Incoming Rules page appears.

Adding an incoming service with another type of protocol

In addition to TCP and UDP, there are several other types of Internet protocols. To allow incoming service to these protocols, you must define both the protocol type and the internal destination. You cannot specify a port number. To allow an incoming service:

1 Using your Web browser, go to http://192.168.111.1.

2 Select **Services**.

The Services menu appears.

3 Click **Allowed Incoming Services**. Click **Add a Service**.

The Add New Incoming Services menu appears.

4 Click **Add Other Service**.

The New Protocol Forward configuration page appears.

5 Enter the protocol name used to forward packets.

WatchGuard uses ICSA standards for protocol names.

6 Enter the private network IP address of the computer hosting this service.

7 Enter a name for the service.

8 Click **Submit**.

The configuration change is saved to the SOHO, and the Show Incoming Rules page appears.

Adding the Any service

In addition to specific protocols and ports, you can elect to send unidentified packets to a single server on your private network. This enables you to open a hole in your firewall for services you would be unable to define using the standard service menus.

CAUTION

Unfortunately, the hole created using the Any service is indiscriminate. Any type of packet can enter through this service and be forwarded automatically to the private network address you provide. For security reasons, WatchGuard does not recommend enabling this feature.

1 Using your Web browser, go to http://192.168.111.1.

2 Select **Services**.
The Services menu appears.

3 Click **Allowed Incoming Services.** Click **Add a Service**.
The Add New Incoming Services menu appears.

4 Click **Add Any Service**.
The Any Service configuration menu appears.

5 Enter the private network IP address of the computer open to the Internet for any type of packet.

6 Click **Submit**.
The configuration change is saved to the SOHO, and the Show Incoming Rules page appears.

Removing an incoming service

You can remove a service no longer required by your network. You should do this any time you no longer support a particular type of incoming traffic, as the removal reduces any possible security weaknesses of the service. To remove an incoming service:

1 Using your Web browser, go to http://192.168.111.1.

2 Select **Services**.
The Services menu appears.

3 Click **Allowed Incoming Services**.
The Incoming Services menu appears.

4 Click **Remove a Service**.

A list of existing, incoming services appears. Services are identified by protocol, port number, and destination address.

5 Enable the checkbox next to the services you would like to remove.

You can disable multiple services simultaneously.

6 Click **Submit**.

The selected service(s) are removed from the list. The list reappears. To return to the Configuration menu, click Configuration at the top of the page.

Blocking outgoing services

By default, the security stance of the SOHO is to allow all outgoing packets from computers on the private network protected by the SOHO firewall to the Internet. You can, however, selectively close your network to certain types of Internet connectivity. For example, one way to prevent users behind your firewall from transferring unsafe files from the Internet to the private network is to block all outgoing FTP.

It is important to remember that each service you block reduces accessibility to the files and destinations on the Internet. Again, this is representative of the inherent trade-off between access and security.

Blocking a TCP or UDP service

The two most commonly used network protocols are TCP and UDP. You can choose to block outgoing TCP or UDP traffic by port number or range.

1 Using your Web browser, go to http://192.168.111.1.

2 Select **Services**.
The Services menu appears.

3 Select **Blocked Outgoing Services**.
The Blocked Outgoing Services Menu appears. In addition, a list of blocked outgoing services is displayed beneath the menu identified by protocol and port number.

4 Click **Block TCP or UDP Service**.
The Block TCP or UDP Service menu appears.

5 Use the drop list to select a protocol type: TCP or UDP.

6 In the **From Port** field, enter the first port number to block. To block a single port, re-enter the port number in the **To Port** field. To block a range of port numbers, enter the last number in the range in the **To Port** field.

7 Click **Submit**.
The configuration change is saved to the SOHO, and the Blocked Service List page appears. The outgoing service is identified by protocol and port number range.

Blocking an alternative protocol

While less common, there are a number of other Internet protocols you may choose to block by name. The WatchGuard SOHO currently only allows you to block non-TCP/UDP protocol on all ports.

1 Using your Web browser, go to http://192.168.111.1.

2 Select **Services**.
The Services menu appears.

3 Click **Blocked Outgoing Services**.
The Block Protocol page appears.

4 Click **Block IP Protocol**.

5 Enter the name of the protocol.
For example, IP.

6 Click **Submit**.

The configuration change is saved to the SOHO and the Blocked Service List page appears.

Removing a blocked outgoing service

At any time, you can reopen a service now required by your network. You should do this when you seek to open access to a particular type of outgoing traffic as the removal increases the accessibility for users on your private network to resources on the Internet. To allow an outgoing service that you had blocked:

1 Using your Web browser, go to http://192.168.111.1.

2 Select **Services**.

The Services menu appears.

3 Click **Blocked Outgoing Services**.

The Blocked Outgoing Services menu appears.

4 Click **Remove Blocked Service**.

A list of existing, outgoing blocked services appears. Services are identified by protocol and port number range.

5 Enable the checkbox next to the services you would like to remove from the list of blocked services.

You can disable blocking for multiple services simultaneously.

6 Click **Submit**.

The selected services are removed from the list. The list reappears. To return to the Configuration menu, click Configuration at the top of the page.

CHAPTER 4

Configuring Virtual Private Networking

This chapter describes an optional feature of the WatchGuard SOHO: virtual private networking with IPSec.

NOTE

The following WatchGuard SOHOs support IPSec tunnels:

- WatchGuard SOHO with VPN Feature Key
- WatchGuard SOHO|tc

Why create a virtual private network?

Virtual Private Networking (VPN) tunnels enable you to simply and securely connect computers in two locations without requiring expensive, dedicated point-to-point data connections. With VPN, you use low cost connections to the Internet to create a virtual connection between two branch offices. Unlike a simple, unencrypted Internet connection, a VPN connection eliminates any significant risk of data being read or altered by outside users as it traverses the Internet.

What you will need

1 One WatchGuard SOHO with VPN and an IPSec-compliant device.

While you can create a SOHO to SOHO VPN, you can also create a VPN with a WatchGuard Firebox or other IPSec-compliant devices.

2 The following information from your Internet service provider for both devices:

- Static IP address
- Default gateway address
- Primary domain name service (DNS) IP address
- If available, a secondary DNS address
- Domain name

3 Network addresses and subnet mask for networks. By default, the Private, network address of the SOHO is 192.168.111.0 and the subnet mask is 255.255.255.0.

NOTE

The internal networks on either end of the VPN tunnel must use different network addresses.

To create an IPSec tunnel between devices you must add information to the configuration files of each that is specific to the site, such as public and private IP addresses. It is imperative to keep these addresses straight. WatchGuard recommends making a table of IP addresses such as the one outlined below.

IP Address Table (example)

Item	Description	Assigned By
Public IP Address	The IP address that identifies the SOHO to the Internet. Site A: 207.168.55.2 Site B: 68.130.44.15	ISP
Public Subnet Mask	The overlay of bits that determines which part of the IP address identifies your network. For example, a Class C address licenses 256 addresses and has a netmask of 255.255.255.0. Site A: 255.255.255.0 Site B: 255.255.255.0	ISP
Local Network Address	A private network address used by an organization’s local network for identifying itself within the network. A local network address cannot be used as a public IP address. WatchGuard recommends using an address from one of the reserved ranges: 10.0.0.0 — 255.0.0.0 172.16.0.0 — 255.240.0.0 192.168.0.0/16 — 255.255.0.0 Site A: 255.255.255.0 Site B: 255.255.255.0	You
Shared Secret	A phrase stored at both ends of the tunnel to authenticate the transmission as being from the claimed origin. The secret can be any phrase, but mixing numerical, special, alphabetical, and uppercase characters improves security. For example, “My1F@ult” is better than “myonefault” Site A: OurLittleSecret Site B: OurLittleSecret	You
Encryption Method	Encryption method determines the length in bits of the key used to encrypt and decrypt communication packets. DES is a 56-bit encryption; 3DES is 168-bit, and therefore much more secure. It is also slower. Either 3DES or DES may be selected as long as both sides use the same method. Site A: 3DES Site B: 3DES	You
Authentication	Both sides must use the same method. Site A: MD5 Site B: MD5	You

About Feature Keys

When you purchase a SOHO, the software for all extended features is provided with that installation regardless of whether you have actually purchased any of those features. Once you have purchased an extended feature, its Feature key allows you to enable its software.

You must enable the Feature Key whenever a feature is updated or changed on the product. For example, if you want to upgrade from 10 seats to 25 seats, you need a Feature Key.

Obtaining a VPN Feature Key

If you purchased a WatchGuard SOHO and would like to purchase a VPN Feature Upgrade from a reseller or e-tailer, open your Web browser to:

http://www.watchguard.com/sales/buyonline.asp

Enabling the VPN Feature Key

Whether you purchased a VPN Feature Key separately or the SOHO|tc, which comes with the key enclosed, you must first enable the VPN Feature Key before configuring virtual private networking. Enabling the VPN feature requires:

- An installed SOHO
- Internet connectivity
- A VPN Feature Key license

Step-by-step instructions for configuring a SOHO VPN tunnel

WatchGuard has developed a series of step-by-step instructions to facilitate configuration for a SOHO VPN tunnel to any of several other IPSec-compliant devices. To download these instructions, open your Web browser to:

http://www.watchguard.com/support/interopvpn.asp

Special considerations

Consider the following before configuring your WatchGuard SOHO VPN network:

- You can connect only two devices together: a WatchGuard SOHO and either another SOHO or another IPSec-compliant device. To set up multiple VPN tunnels, you will need to upgrade at least one SOHO to a WatchGuard Firebox configured with the WatchGuard VPN Manager.
- Each device must be able to send messages to the other. If either device has a dynamically assigned Internet (IP) address (see “Network addressing” on page 12 for an explanation of dynamic IP addresses), it will not be able to find its remote counterpart.
- Both devices must be set to use the same encryption method. The two choices are DES or 3DES. When connecting two Windows NT networks, the two networks must be in the same Microsoft Windows domain or be trusted domains. This is a Microsoft Networking design implementation and is not a limitation of the SOHO device.

Frequently asked questions

Why do I need a static public address?

To create a VPN connection, one SOHO must be able to find its partner device. If the addresses were allowed to change, the SOHO could not find its remote computer.

How do I get a static public IP address?

Contact your ISP. Some systems, like many cable modem systems, use dynamically assigned addresses to simplify basic installations. Some providers may also use this feature to discourage users from creating Web servers. These providers usually offer a static IP address option.

How do I connect three or four offices together?

To connect more than two offices together, WatchGuard recommends designating one office the center of a “star” network configuration and upgrading it to a WatchGuard Firebox. You can then manage multiple tunnels to SOHOs or other IPSec compliant devices from the central Firebox.

How do I troubleshoot the connection?

If you can ping the remote SOHO and computers behind it, your VPN tunnel is up and running. Any remaining problems are probably caused by the MS Networking or the applications being used.

OK, ping is not working.

If you cannot ping the local network address of the remote SOHO, take the following steps to classify the problem:

1 Ping the public address of the remote SOHO.

For example, at Site A, ping 68.130.44.15 (Site B). You should get a reply. If not, verify the Public Network Settings of Site B. If they are correct, verify that computers at Site B can access the internet. If you are still having trouble, contact your ISP.

2 Once you can ping the public address of each SOHO, try pinging the local address.

From Site A, ping 192.168.112.1. If the tunnel is up, you should get a reply from the remote SOHO. If not, re-check the Local Settings page. Make sure that the local DHCP addresses ranges do not overlap. For example, IP addresses on either side of the tunnel must not be the same.

How do I obtain a VPN Feature Key?

Feature keys come inside the box when you buy a WatchGuard SOHO|tc. They can also be purchased online at:

http://www.watchguard.com/sales/buyonline.asp

How do I enable a VPN Tunnel?

Full instructions for enabling a VPN tunnel can be found online:

http://www.watchguard.com/support/interopvpn.asp

CHAPTER 5

Additional SOHO Features

SOCKS for SOHO

SOCKS is a network proxy filter that works with SOCKS-aware applications such as ICQ. A typical SOCKS-dependent application requires that several sockets be opened and made available to the Internet. When a SOCKS-aware application (ICQ is SOCKS-aware) registers with the SOCKS server, SOCKS is able to manage the need of the application to have many ports open.

To use an application with SOCKS, the application must be configured with the SOCKS server information. The SOHO has limited SOCKS support included as of its version 2.0 firmware and later.

Setting up your SOCKS application for use with the SOHO requires no reconfiguration of the SOHO appliance itself. Your SOHO acts as the SOCKS proxy. You must, however, configure your application to be compliant with the SOHO implementation of SOCKS version 5.

SOHO SOCKS implementation

The SOHO SOCKS feature has the following characteristics and limitations:

- SOHO supports SOCKS version 5 only.
- It is a limited version of SOCKS and does not support authentication, nor does it support Domain Name System (DNS) resolution.

CAUTION

Configure the particular application so that it will *not* attempt to make DNS look-ups with SOCKS. However, some applications use only DNS through SOCKS and therefore will not function properly with the SOHO.

- Compatible SOCKS-aware applications that can be used through the SOHO include ICQ, IRC, and AOL Messenger.
- When you open a SOCKS application, it opens a “hole” in the SOHO firewall that is available to anyone on your private network. SOCKS applications therefore pose a significant security risk. To disable the port and close the security risk, see “Disabling SOCKS on the SOHO” on page 53.

Configuring your SOCKS application on the SOHO

Other than ensuring that port 1080 is open to run a SOCKS-dependent application, the rest of the configuration tasks must be done with the SOCKS-dependent application. Different applications may have variations in their settings, but you must configure the SOCKS-dependent application, using the application user interface, to certain parameters to enable the SOHO to pass SOCKS applications:

- If you can choose different services or versions of SOCKS, choose SOCKS version 5..
- Select port 1080 for the application
- For the SOCKS proxy, enter the URL or IP address of the SOHO private network. The default IP address is 192.168.111.0.

Disabling SOCKS on the SOHO

Once you have used a SOCKS-compliant application through the SOHO, the primary SOCKS port is available to anyone on your private network. You can, however, close this security gap between uses of SOCKS applications. To disable SOCKS:

1 Using your Web browser, go to http://192.168.111.1.

2 Select **System Administration**.
The System Administration menu appears.

3 Select **Service Options.**
The Service Options menu appears.

4 Enable the checkbox next to the **Disable SOCKS proxy** selection.
This disables the SOHO from acting as a SOCKS proxy.

5 Click **Submit** to implement this configuration.

When you need to use SOCKS again, follow this procedure:

1 Using your Web browser, go to http://192.168.111.1.

2 Select **System Administration**.
The System Administration menu appears.

3 Select **Service Options.**
The Service Options menu appears.

4 Disable the checkbox next to the **Disable SOCKS proxy** selection.
This enables the SOHO to act as a SOCKS proxy.

5 Click **Submit** to register the change.
The SOHO is enabled again as a Proxy server and ready to pass SOCKS packets.

SOHO logging

The WatchGuard SOHO generates an ongoing activity log stored on the SOHO. This log stores a maximum of 150 messages. When it reaches its maximum, the oldest message is deleted.

The log messages may include time synchronizations between SOHO and the WatchGuard Key Server, discarded packets for a packet handling violation, duplicate messages, time-outs for attempting to open the WatchGuard Feature Key Server, or return error messages.

Viewing SOHO log messages

1 Using your Web browser, go to http://192.168.111.1.

2 Click **System Information**.
The System page appears.

3 Click **Event Log.**
The Event Log page appears and the log file messages can be viewed.

Setting a remote log host

Setting a remote log host causes log messages to be transmitted to a WatchGuard log server with an account set up for your configuration. It has the advantages of saving local resources for other less memory-intensive tasks and puts the log host at the WatchGuard site where customer support can examine logs at your request to troubleshoot security problems.

1 Using your Web browser, go to http://192.168.111.1.

2 Click **System Administration**.
The System Administration menu appears.

3 Select **Remote Logging**.
The Secure Remote Logging page appears.

4 Check the box labeled **Enable Remote Logging**.

5 Enter the IP address of the WatchGuard log server that will be your remote secure log host.

6 In the **Pass Phrase** field, enter a pass phrase that will serve as a password to gain access to the log server.

7 In the **Retype Phrase** field, re-enter the pass phrase.

8 Click **Submit**.
This transmits your new user and log names to WatchGuard.

Rebooting a WatchGuard SOHO

To reboot a SOHO located on a local system, use one of the following methods:

- Using your Web browser, go to http://192.168.111.1, click **System Information**, then click **Features and Version Information.** Click the **Reboot** button
- Unplug the SOHO and plug it back in

To reboot a SOHO located on a remote system, the SOHO must be configured to allow either incoming Web or FTP traffic to the private, internal address of the SOHO. For information on configuring a SOHO to allow incoming traffic, see “Allowing incoming services” on page 35

You can than use one of the following methods:

- Open a special HTML page with the public, external SOHO IP address in the URL followed by `/rebootreq.` For example, http://209.191.160.60/rebootreq.

- Send an FTP command to the remote SOHO device. Use an FTP application to connec to the SOHO device, then enter the command: `quote rebt`

CHAPTER 6

WatchGuard SOHO WebBlocker

WatchGuard SOHO WebBlocker is an optional feature of the WatchGuard SOHO and SOHO|tc that provides Web site filtering capabilities. It gives you precise control over the types of Web sites users on your private network are allowed to view.

How WebBlocker works

WebBlocker relies on a URL database, the CyberNOT list, built and maintained by CyberPatrol. The WebBlocker database contains many thousands of IP addresses and directories. These addresses are divided into categories based on content such as Drug Culture, Intolerance, or Sexual Acts.

WatchGuard updates the Webblocker server with a new database at regular intervals.

Once you have purchased and enabled Webblocker, every time a user on your private network attempts to reach an Internet Web site, the SOHO queries the WatchGuard database and determines whether or not to block the site. The SOHO considers the following conditions in determining whether or not to block the site:

Web site not in WebBlocker database

If the site is not in the WatchGuard WebBlocker database, the Web browser opens the page for viewing.

Web site in WebBlocker database

If the site is in the WatchGuard WebBlocker database, the SOHO checks whether or not you have chosen to block that type (or category) of site. When the category is blocked, the browser displays a page informing the user that the site is unavailable for viewing. If the category is not blocked, the Web browser opens the page for viewing.

WatchGuard WebBlocker database unavailable

If for any reason the WatchGuard WebBlocker database is unavailable (for example, if there is briefly a problem between your ISP and the nearest WatchGuard server), the browser displays a page informing the user that the site is unavailable for viewing.

Bypassing the SOHO WebBlocker

Occasionally you may want to allow select individuals to bypass the filtering functions of SOHO WebBlocker. For example, if you are using the SOHO at home as a telecommuter, you may want to block a category from your children while still retaining access for the adults in the household.

The SOHO WebBlocker configuration page includes a Full Access Password field. You can configure this password and give it to only those members of your private network who should be able bypass WebBlocker. When a site is blocked or unavailable, the user has the option of entering the full access password. With the password entered, the browser displays the otherwise blocked site. After the password is entered, the user can browse any site on the Internet until either the Password Expiration duration passes or the individual closes the browser.

Purchasing and enabling SOHO WebBlocker

To use WatchGuard SOHO WebBlocker, you must first purchase and enable the WebBlocker feature key, and activate LiveSecurity. After you have logged in to LiveSecurity, follow the instructions on the Web site.

Configuring the SOHO WebBlocker

Use the WatchGuard SOHO Configuration pages to enter settings for the SOHO WebBlocker. You must provide the location of the nearest WatchGuard WebBlocker server, a full access password for bypassing WebBlocker, the duration that the full access password is valid, and the categories you want to block.

1 Using your Web browser, go to http://192.168.111.1.

2 Select **Services**.
The Services menu appears.

3 Select **Web Blocking**.
The WebBlocking configuration page appears. It provides controls for activating and controlling WebBlocker, as well as checkboxes to determine which content types can be accessed.

4 Enable the checkbox labeled **Enable Web Blocking**.

This turns on SOHO WebBlocker.

5 Enter the full access password.

The full access password gives selected users a password that bypasses otherwise blocked sites.

6 Enter the password expiration duration in minutes.

Setting the full access password expiration at, for example, 15 minutes, ensures that unattended Web browsers will be disconnected after sitting idle for 15 minutes. This ensures that only the individuals chosen to use the full access password will be able to browse otherwise blocked sites.

7 Create your organization's browsing profile.

Enable the checkboxes for the categories to which you want to deny access.

8 Click the **Submit** button to register your changes.

Submitting the page alters your configuration file to turn on WebBlocker and block users from accessing Web sites that match the categories you checked in Step 7.

WebBlocker categories

WebBlocker relies on a URL database built and maintained by SurfControl. The Firebox automatically and regularly downloads a current version of the WebBlocker database from the WatchGuard Web site to your log host. The Firebox then copies the new version into memory. This process ensures the most up-to-date Web filtering and blocking capabilities.

SurfControl constantly searches the Internet to update the list of blocked sites. The WebBlocker database contains the following 14 categories.

NOTE

In all of the categories sites to be blocked are selected by advocacy rather than opinion or educational material. For example, the Drugs/Drug Culture category blocks sites describing how to grow and use marijuana but does not block sites discussing the historical use of marijuana.

Alcohol/Tobacco

Pictures or text advocating the sale, consumption, or production of alcoholic beverages and tobacco products.

Illegal Gambling

Pictures or text advocating materials or activities of a dubious nature that may be illegal in any or all jurisdictions, such as illegal business schemes, chain letters, copyright infringement, computer hacking, phreaking (using someone's phone lines without permission), and software piracy. Also includes text advocating gambling relating to lotteries, casinos, betting, numbers games, online sports, or financial betting, including non-monetary dares.

Militant/Extremist

Pictures or text advocating extremely aggressive or combative behavior or advocacy of unlawful political measures. Topic includes groups that advocate violence as a means to achieve their goals. It also includes pages devoted to "how to" information on the making of weapons (for both lawful and unlawful reasons), ammunition, and pyrotechnics.

Drug Culture

Pictures or text advocating the illegal use of drugs for entertainment. Includes substances used for other than their primary purpose to alter the individual's state of mind, such as glue sniffing. This does not include (that is, if selected these sites would not be WebBlocked under this category) currently illegal drugs legally prescribed for medicinal purposes (such as, drugs used to treat glaucoma or cancer).

Satanic/Cult

Pictures or text advocating devil worship, an affinity for evil, wickedness, or the advocacy to join a cult. A cult is defined as: A closed society that is headed by a single individual where loyalty is demanded and leaving is punishable.

Intolerance

Pictures or text advocating prejudice or discrimination against any race, color, national origin, religion, disability or handicap, gender, or sexual orientation. Any picture or text that elevates one group over another. Also includes intolerant jokes or slurs.

Gross Depictions

Pictures or text describing anyone or anything that is either crudely vulgar, grossly deficient in civility or behavior, or shows scatological impropriety. Topic includes depictions of maiming, bloody figures, and indecent depiction of bodily functions.

Violence/Profanity

Pictures or text exposing extreme cruelty or profanity. Cruelty is defined as: Physical or emotional acts against any animal or person that are primarily intended to hurt or inflict pain. Topic includes obscene words, phrases, and profanity in either audio, text, or pictures.

Search Engines

Search engine sites such as AltaVista, InfoSeek, Yahoo!, and WebCrawler.

Sports and Leisure

Pictures or text describing sporting events, sports figures, or other entertainment activities.

Sex Education

Pictures or text advocating the proper use of contraceptives. Topic includes sites devoted to the explanation and description of condoms, oral contraceptives, intrauterine devices, and other types of contraceptives. It also includes discussion sites devoted to conversations with partners about sexually transmitted diseases, pregnancy, and sexual boundaries. Not included in this category are commercial sites selling sexual paraphernalia (topics included under *Sexual Acts*).

Sexual Acts

Pictures or text exposing anyone or anything involved in explicit sexual acts and/or lewd and lascivious behavior. Topic includes masturbation, copulation, pedophilia, as well as intimacy involving nude or partially nude people in heterosexual, bisexual, lesbian, or homosexual encounters. It also includes phone sex advertisements, dating services, adult personals, and sites devoted to selling pornographic CD-ROMs and videos.

Full Nudity

Pictures exposing any or all portions of human genitalia. Topic does *not* include sites categorized as Partial/Artistic Nudity containing partial nudity of a wholesome nature. For example, it does not include Web sites for publications such as *National Geographic* or *Smithsonian* magazine nor sites hosted by museums such as the Guggenheim, the Louvre, or the Museum of Modern Art.

Partial/Artistic Nudity

Pictures exposing the female breast or full exposure of either male or female buttocks except when exposing genitalia which is handled under the Full Nudity category. Topic does not include swimsuits, including thongs.

Searching for blocked sites

To verify whether WebBlocker is blocking a site as part of a category block, visit the Search/Submit form on the Cyber Patrol Web site.

1 Using your Web browser, go to:

http://www.cyberpatrol.com/cyberNOT/default.htm

2 Scroll down to display the Cyber Patrol CyberNOT® Search Engine.

3 Type the URL of the site to check.

4 Click **Check if the URL is on the CyberNOT List**.

The search engine results notify you whether or not the site is on the CyberNOT list. Use this site also to suggest a new site for both the CyberNOT and CyberYES list, as well as to request a site review.

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